1. (Currently Amended) A method for the analysis, monitoring, or both, of the partial discharge behavior of an electrical operating device, the method comprising:

recording partial discharge data in process state matrices, the partial discharge data including amplitude of a partial discharge, phase angle of said partial discharge, and frequency of occurrence of said partial discharge, said partial discharge data being depicted in a matrix element of the process state matrix;

at a first time, registering a partial discharge process state in a first process state matrix;

at a second time after said first time, registering a second partial discharge process state in a second process state matrix; and

comparing the first and the second process state matrices, said comparing comprising comparison and scaling;

for each process state matrix, first determining state parameters (Z_n); and

comparing said state parameters (Z_n) for analysis, monitoring, or both, of the states of the insulation of said electrical operating device.

2. (Previously Presented) The method as claimed in claim 1, further comprising, for each matrix element of the process state matrix, depicting the amplitude of a partial discharge as a function of the phase angle; and

assigning each matrix element an associated frequency of occurrence.

3. (**Cancelled**)

4. (Currently Amended) The method as claimed in claim ~~3~~1, further comprising:

determining the variation over time of the state parameters (Z_n) from process state matrices; and

assessing the change over time or the prognosis of the further change over time of the partial discharge behavior based on said variation over time of the state parameters (Z_n).

5. (Previously Presented) The method as claimed in Claim 1, further comprising:
weighting, scaling, or both, the individual matrix elements differently, depending on the amplitude, the phase angle, or the frequency of occurrence, before said individual matrix elements are used in comparison and scaling.

6. (Previously Presented) The method as claimed in Claim 1, wherein comparison comprises forming similarity values which reproduce the difference between the process state matrices.

7. (Previously Presented) The method as claimed in Claim 1, further comprising:
combining matrix elements of the process state matrices in discrete windows; and
averaging together, scaling together, or both, each of the matrix elements of the process state matrices of a window before using in said comparison.

8. (Previously Presented) The method as claimed in claim 7, further comprising:
comparing the contents of corresponding windows of different process state matrices; and
weighting, scaling, or both, different windows in a process state matrix differently.

9. (Previously Presented) The method as claimed in Claim 6, further comprising:
combining matrix elements in discrete regions of interest of said process state matrices.

10. (Previously Presented) The method as claimed in claim 9, further comprising:
dividing up the discrete regions of interest into discrete windows; and
treating equally the contents of windows of identical regionsin said comparison.

11. (Previously Presented) The method as claimed in Claim 9, further comprising:
linking state changes obtained from the comparisons of the state parameters obtained from regions of interest to obtain a number of state parameters.

12. (Previously Presented) The method as claimed in Claim 9, further comprising:

linking state changes obtained from the comparisons of the state parameters obtained from regions of interest with at least one state parameter obtained from regions not of interest, to obtain a number of state parameters.

13. (**Canceled**)

14. (Currently Amended) The method as claimed in Claim ~~3~~1, wherein determining state parameters (Z_n) comprises determining scaled state parameters (Z_n).

15. (Previously Presented) The method as claimed in Claim 6, further comprising:

visualizing the process state matrices in a representation of the amplitudes as a function of the phase angle, and in an encoding of each such pixel as a function of the frequency of occurrence.

16. (Previously Presented) The method as claimed in Claim 7, further comprising:

defining the windows in the plane covered by phase angles and amplitudes.

17. (Currently Amended) The method as claimed in Claim 9, further comprising:

weighting, scaling, or both, different discrete regions of interest differently in said comparison~~,~~.

18. (Previously Presented) The method as claimed in Claim 17, further comprising:

defining the regions of interest in the plane covered by phase angles and amplitudes.

19. (Previously Presented) A method as claimed in Claim 1, wherein the analysis, monitoring, or both, of the development of the partial discharge behavior of the electrical

operating device is performed over time.

20. (Previously Presented) A method as claimed in Claim 7, wherein combining comprises combining adjacently arranged matrix elements in discrete windows.

21. (Previously Presented) A method as claimed in Claim 9, wherein combining comprises combining adjacently arranged matrix elements in discrete regions of interest.

22. (Previously Presented) A method as claimed in Claim 10, wherein treating equally in said comparison is performed after averaging of the matrix elements of the respective window.

23. (Previously Presented) A method as claimed in Claim 11, wherein said linking comprises mathematical linking.

24. (Currently Amended) An apparatus for the analysis, monitoring, or both, of the partial discharge behavior of an electrical operating device, the apparatus comprising:

means for recording partial discharge data in process state matrices, the partial discharge data including amplitude of a partial discharge, phase angle of said partial discharge, and frequency of occurrence of said partial discharge, said partial discharge data being depicted in a matrix element of the process state matrix;

means for, at a first time, registering a partial discharge process state in a first process state matrix;

means for, at a second time after said first time, registering a second partial discharge process state in a second process state matrix; and

means for comparing the first and the second process state matrices, said means for comparing comprising means for comparison and scaling;

means for determining state parameters (Z_n) for each process state matrix; and

means for comparing said state parameters (Z_n) for analysis, monitoring, or both, of the

states of the insulation of said electrical operating device.